We claim:

1. In an embossing apparatus for embossing a substantially continuous web of sheet material, an embossing roll comprising:

an elongated core having first and second ends, said elongated core being formed of a substantially rigid material, and

an elongated sleeve having an embossing pattern formed thereon, said elongated sleeve being formed of a material which is less rigid than said core;

wherein said elongated sleeve is releasably secured to said core such that said elongated sleeve is axially and circumferentially fixed with respect to said core when in operation and can be selectively axially removed from said core.

2. The embossing roll as defined in claim 1, wherein said core is formed of steel.

3. The embossing roll as defined in claim 1, wherein said sleeve is formed of a material having a P&J hardness in a range of 0 to 250.

4. The embossing roll as defined in claim 3, wherein the hardness of said sleeve is in a range of 5 to 40 P&J.

5. The embossing roll as defined in claim 4, wherein the hardness of said sleeve is approximately 10 P&J.

6. The embossing roll as defined in claim 1, wherein said elongated sleeve is formed of a material selected from a group consisting of metallic alloys, ceramic, polymers, fiberglass, kevlar, vulcanized rubber and fiber reinforced resins.

7. The embossing roll as defined in claim 1, wherein said elongated sleeve is covered with a material selected from a group consisting of metallic alloys, ceramic, polymers, fiberglass, kevlar, vulcanized rubber and fiber reinforced resins.

8. The embossing roll as defined in claim 1, wherein said embossing pattern is formed in an outer surface of said sleeve.

9. The embossing roll as defined in claim 8, wherein said embossing pattern is engraved in said outer surface of said sleeve.

10. The embossing roll as defined in claim 9, wherein said embossing pattern is laser engraved in said outer surface.

11. The embossing roll as defined in claim 10, wherein said embossing pattern is engraved by way of a three dimensional laser engraving.

12. The embossing roll as defined in claim 11, wherein said embossing pattern includes embossing elements having curvalinear side walls, spherical surfaces and multiple elevations with respect to a reference surface.

13. The embossing roll as defined in claim 1, further comprising positioning means for selectively positioning said sleeve with respect to said core.

14. The embossing roll as defined in claim 13, wherein said positioning means includes at least one axially extending bore and at least one radially extending bore intersecting said axially extending bore formed in said core for selectively communicating pressurized air to a surface of said core.

15. The embossing roll as defined in claim 14, wherein said sleeve is formed of an expandable material such that when pressurized air is passed to said surface of said core, said sleeve expands so as to be displaceable with respect to said core.

16. The embossing roll as defined in claim 15, wherein said core includes a plurality of radially extending bores intersecting said axially extending bore.

17. The embossing roll as defined in claim 16 further comprising a circumferential groove in a surface of said core interconnecting said radially extending passages.

18. The embossing roll as defined in claim 17, wherein said circumferential groove is .0625" to .1875" wide and .0625" to .1875" deep.

19. The embossing roll as defined in claim 16, wherein an inner diameter of said sleeve is substantially constant.

20. The embossing roll as defined in claim 17, wherein an inner surface of said sleeve adjacent respective ends of said sleeve is tapered outwardly to facilitate positioning of said sleeve on said core.

21. The embossing roll as defined in claim 13, wherein said positioning means includes a frusto-conical outer surface of said core and a substantially complimentary frusto-conical inner surface of said sleeve and fixing means for axially securing said sleeve with respect to said core such that said sleeve can be axially received over said core.

22. A method of forming an embossing roll for embossing a substantially continuous web of sheet material comprising:

providing an elongated core formed of a substantially rigid material;

positioning an elongated sleeve formed of a less rigid material over said elongated core; and

engraving an embossing pattern in said elongated sleeve;

wherein said elongated sleeve is selectively axially removable from said core.

23. The method of forming an embossing roll as defined in claim 22, wherein said step of engraving said sleeve includes laser engraving.

24. The method of forming an embossing roll as defined in claim 22, wherein the step of laser engraving said sleeve includes three dimensional laser engraving.

25. The method of forming an embossing roll as defined in claim 22, wherein said core is formed of steel.

26. The method of forming an embossing roll as defined in claim 22, wherein said sleeve is formed of a material having a P&J hardness in a range of 0 to 250.

27. The method of forming an embossing roll as defined in claim 26, wherein the hardness of said sleeve is in a range of 5 to 40 P&J.

28. The method of forming an embossing roll as defined in claim 27, wherein the hardness of said sleeve is approximately 10 P&J.

29. The method of forming an embossing roll as defined in claim 22, wherein said elongated sleeve is formed of a material selected from a group consisting of metallic alloys, ceramic, polymers, fiberglass, kevlar, vulcanized rubber and fiber reinforced resins.

30. The method of forming an embossing roll as defined in claim 22, wherein said elongated sleeve is covered with a material selected from a group consisting of metallic alloys, ceramic, polymers, fiberglass, kevlar, vulcanized rubber and fiber reinforced resins.

31. The method of forming an embossing roll as defined in claim 22, wherein the step of positioning said sleeve includes selectively expanding an inner surface of said sleeve with respect to said core and sliding said sleeve along said core.

32. The method of forming an embossing roll as defined in claim 29, wherein the step of positioning said sleeve includes communicating pressurized air from a central bore of core to an outer surface of said core for forming an air cushion between said core and said sleeve.

33. A system for embossing a substantially continuous web of material comprising:

a supply means for supplying at least one substantially continuous web of material;

feed means for feeding said substantially continuous web of material;

embossing means for embossing a predetermined pattern in said web material; and

a take-up means for taking-up said web material;

said embossing means comprising;

at least one elongated core formed of a substantially rigid material; and

a plurality of elongated sleeves each having an embossing pattern formed thereon;

wherein said plurality of elongated sleeves are interchangeable with one another with each of said plurality of elongated sleeves being selectively secured to said core in accordance with the predetermined embossing pattern formed thereon.

34. The system as defined in claim 33, wherein said core is formed of steel.

35. The system as defined in claim 33, wherein said sleeve is formed of a material having a P&J hardness in a range of 0 to 250.

36. The system as defined in claim 35, wherein the hardness of said sleeve is in a range of 5 to 40 P&J.

37. The system as defined in claim 36, wherein the hardness of said sleeve is approximately 10 P&J.

38. The system as defined in claim 33, wherein said elongated sleeve is formed of a material selected from a group consisting of metallic alloys, ceramic, polymers, fiberglass, kevlar, vulcanized rubber and fiber reinforced resins.

39. The system as defined in claim 33, wherein said elongated sleeve is covered with a material selected from a group consisting of metallic alloys, ceramic, polymers, fiberglass, kevlar, vulcanized rubber and fiber reinforced resins.

40. The system as defined in claim 33, wherein said embossing pattern is engraved in an outer surface of said sleeve.

41. The system as defined in claim 40, wherein said embossing pattern is laser engraved in said outer surface.

42. The system as defined in claim 40, wherein said embossing pattern is engraved by way of a three dimensional laser engraving.

43. The system as defined in claim 42, wherein said embossing pattern includes embossing elements having curvalinear side walls and spherical surfaces, and multiple elevations with respect to a reference surface.

44. The system as defined in claim 33, further comprising positioning means for selectively positioning said sleeve with respect to said core.

45. The system as defined in claim 33, wherein said positioning means includes at least one axially extending bore and at least one radially extending bore intersecting said axially extending bore formed in said core for selectively communicating pressurized air to a surface of said core.

46. The system as defined in claim 45, wherein said sleeve is formed of an expandable material such that when pressurized air is passed to said surface of said core, said sleeve expands so as to be displaceable with respect to said core.

47. The system as defined in claim 45, wherein said core includes a plurality of radially extending bores intersecting said axially extending bore.

48. The system as defined in claim 47, further comprising a circumferential groove in a surface of said core interconnecting said radially extending passages.

49. The system as defined in claim 48, wherein said circumferential groove is .0625" to .1875" wide and .0625" to .1875" deep.

50. The system as defined in claim 46, wherein an inner diameter of said sleeve is substantially constant.

51. The system as defined in claim 46, wherein an inner surface of said sleeve adjacent respective ends of said sleeve is tapered outwardly to facilitate positioning of said sleeve on said core.

52. The system as defined in claim 44, wherein said positioning means includes a frusto-conical outer surface of said core and a substantially complimentary frusto-conical inner surface of said sleeve and fixing means for axially securing said sleeve with respect to said core such that said sleeve can be axially received over said core.

53. A system for embossing a substantially continuous web of material comprising:

a supply means for supplying at least one substantially continuous web of material;

feed means for feeding said substantially continuous web of material;

embossing means for embossing a predetermined pattern in said web material; and

a take-up means for taking-up said web material;

wherein at least one roll of the system includes;

an elongated core formed of a substantially rigid material; and

an elongated sleeve formed of a material less rigid than said elongated core with said elongated sleeve being releasably secured to said core such that said elongated sleeve is axially and circumferentially fixed with respect to said core when in operation and can be selectively axially removed from said core.

54. The system as defined in claim 53, wherein said core is formed of steel.

55. The system as defined in claim 53, wherein said sleeve is formed of a material having a P&J hardness in a range of 0 to 250.

56. The system as defined in claim 55, wherein the hardness of said sleeve is in a range of 5 to 40 P&J.

57. The system as defined in claim 56, wherein the hardness of said sleeve is approximately 10 P&J.

58. The system as defined in claim 53, wherein said elongated sleeve is formed of a material selected from a group consisting of metallic alloys,

ceramic, polymers, fiberglass, kevlar, vulcanized rubber and fiber reinforced resins.

59. The system as defined in claim 53, wherein said elongated sleeve is covered with a material selected from a group consisting of metallic alloys, ceramic, polymers, fiberglass, kevlar, vulcanized rubber and fiber reinforced resins.

60. The system as defined in claim 53, wherein said sleeve includes an embossing pattern engraved in an outer surface of said sleeve.

61. The system as defined in claim 60, wherein said embossing pattern is laser engraved in said outer surface.

62. The system as defined in claim 61, wherein said embossing pattern is engraved by way of a three dimensional laser engraving.

63. The system as defined in claim 62, wherein said embossing pattern includes embossing elements having curvalinear side walls and spherical surfaces and multiple elevations with respect to a reference surface.

64. The system as defined in claim 53, further comprising positioning means for selectively positioning said sleeve with respect to said core.

65. The system as defined in claim 64, wherein said positioning means includes at least one axially extending bore and at least one radially extending bore intersecting said axially extending bore formed in said core for selectively communicating pressurized air to a surface of said core.

66. The system as defined in claim 65, wherein said sleeve is formed of an expandable material such that when pressurized air is passed to said surface of said core, said sleeve expands so as to be displaceable with respect to said core.

67. The system as defined in claim 66, wherein said core includes a plurality of radially extending bores intersecting said axially extending bore.

68. The system as defined in claim 67, further comprising a circumferential groove in a surface of said core interconnecting said radially extending passages.

69. The system as defined in claim 68, wherein said circumferential groove is .0625" to .1875" wide and .0625" to .1875" deep.

70. The system as defined in claim 66, wherein an inner diameter of said sleeve is substantially constant.

71. The system as defined in claim 66, wherein an inner surface of said sleeve adjacent respective ends of said sleeve is tapered outwardly to facilitate positioning of said sleeve on said core.

72. The system as defined in claim 64, wherein said positioning means includes a frusto-conical outer surface of said core and a substantially complimentary frusto-conical inner surface of said sleeve and fixing means for axially securing said sleeve with respect to said core such that said sleeve can be axially received over said core.